resistance detector element for monitoring the lapping process, both of which are formed on a substrate, with illuminating light whose wavelength is [in] 300 nm or less[, preferably being in 200 nm];

forming an image by imaging light reflected [light] from said elements;

converting said image to an image signal through photoelectric conversion; and

detecting geometrical information of the abovementioned magnetoresistance effect element and the above-mentioned resistance detector element for monitoring the lapping process from said image signal.

2. (amended) Method [for] of measuring dimensions and alignment of [the] a thin film magnetic head according to claim 1, wherein the [above-mentioned] illuminating light includes a wavelength component of 248 nm.

3. (amended) Method [for] of measuring dimensions and alignment of [the] a thin film magnetic head according to claim 1, wherein the [above-mentioned] illuminating light includes a wavelength component of 266 nm.

4. (amended) Method [for] of measuring dimensions and alignment of [the] a thin film magnetic head according to claim 1, wherein the [above-mentioned] illuminating light includes a wavelength component of 213 nm.

5. (amended) Method [for] of measuring dimensions and alignment of [the] a thin film magnetic head according to claim 1, wherein the [above-mentioned] geometrical information includes dimensions of the element or alignment error of the element.

6. (amended) Method [for] of measuring dimensions and alignment of [the] a thin film magnetic head according to claim 1, wherein the [above-mentioned] magnetoresistance effect element and the [above-mentioned] resistance detector element for monitoring the lapping are covered with end face protection films.

7. (amended) Method [for] of measuring dimensions and alignment of a thin film magnetic head, including the steps of:

illuminating a thin film magnetic head formed on a substrate with illuminating light;

forming interference light by making light reflected [light] from [the above-mentioned] said substrate illuminated with said [illumination] illuminating light interfere with [the] reference light;

obtaining an image signal by picking up an image generated by said interference light [thus formed]; and

measuring dimensions and alignment of the [above-mentioned] thin film magnetic head using said image signal.

8. (amended) Method [for] measuring dimensions and alignment of [the] a thin film magnetic head according to claim 7, wherein the [above-mentioned] thin film magnetic head [pattern] includes a pattern of a magnetoresistance effect element and that of a resistance detector element for monitoring [the] a lapping process.

9. (amended) Method [for] of measuring dimensions and alignment of [the] a thin film magnetic head according to claim [7] 8, wherein measurement of dimensions and alignment of the [above-mentioned] thin film magnetic head is performed by detecting geometrical information of the [above-mentioned] magnetoresistance effect element and the [above-mentioned] resistance detector element for monitoring the lapping process from the [above-mentioned] image signal.

10. (amended) Method [for] of measuring dimensions and alignment of [the] a thin film magnetic head according to claim [7] 8, wherein the wavelength of the light for illuminating the [above-mentioned] magnetoresistance effect element and the [above-mentioned] resistance detector element for monitoring the lapping process, both of which are formed on the substrate, is [in the] 300 nm or less[, preferably being in 200 nm].

11. (amended) Apparatus for measuring dimensions and alignment of thin film magnetic head during a lapping process, comprising:

a light source emitting light whose wavelength is [in the] 300 nm or less[, preferably being in the 200 nm];

illuminating means for illuminating a magnetoresistance effect element and a resistance detector element for monitoring the lapping process, both of which are formed on a substrate, with illuminating light emitted from [the above-mentioned] said light source;

imaging means for [imaging] obtaining an optical image of [the above-mentioned] said substrate, illuminated [with the above-mentioned] by said illuminating means;

image [picking] pick up means for converting an optical image of [the above-mentioned] said substrate, which is imaged [with the above-mentioned] by said imaging means, to an image signal through photoconversion; and

geometrical information detecting means for detecting geometrical information of [the above-mentioned] said magnetoresistance effect element and [the above-mentioned] said resistance detector element for monitoring the lapping from [the] said image signal [of the above-mentioned substrate] that is obtained by [the above-mentioned] said image [picking] pick up means.

12. (amended) Apparatus for measuring dimensions and alignment of [the] a thin film magnetic head according to claim 11, wherein [the above-mentioned] said light source emits light [of] having a wavelength of 248 nm.

13. (amended) Apparatus for measuring dimensions and

alignment of [the] a thin film magnetic head according to claim 11, wherein [the above-mentioned] said light source emits light [of] having a wavelength of 266 nm.

14. (amended) Apparatus for measuring dimensions and alignment of [the] a thin film magnetic head according to claim 11, wherein [the above-emitted] said light source emits light [of] having a wavelength of 213 nm.

15. (amended) Apparatus for measuring dimensions and alignment of [the] a thin film magnetic head according to claim 11, wherein [the above-mentioned] said geometrical information [that the above-mentioned] provided by said geometrical information detecting means [detects] includes at least one of dimensions of the element [or] and alignment error of the element.

16. (amended) Apparatus for measuring dimensions and alignment of [the] a thin film magnetic head according to claim 11, wherein [the above-mentioned] said magnetoresistance effect element and [the above-mentioned] said resistance detector element for monitoring the lapping process, both of which are formed on the above-mentioned substrate, are covered with end face protection films.

17. (amended) Apparatus for measuring dimensions and alignment of [the] a film magnetic head, comprising:

a light source;

illuminating means for illuminating a pattern of the thin film magnetic head formed on a substrate with illuminating light emitted from said light source;

interfering means for forming interference light by making [reflected] illuminating light reflected from [the above-mentioned] said substrate [illuminated with said illuminating means] interfere with a reference light;

image [picking] pick up means for obtaining an image signal by picking up an image generated by [the above-mentioned] said interference light [which is] formed by said interfering means; and

measuring means for measuring dimensions and alignment of [the above-mentioned] said thin film magnetic head from [the above-mentioned] said image signal which is obtained by said image [picking] pick up means.

18. (amended) Apparatus for measuring dimensions and alignment of [the] a thin film magnetic head according to claim 17, wherein [the above-mentioned] said light source emits light [of] having a wavelength [in the] of 300 nm or less[, preferably of a wavelength in 200 nm].

19. (amended) Apparatus for measuring dimensions and alignment of [the] a thin film magnetic head according to claim 17, wherein [the above-mentioned] said measuring means detects geometrical information of a magnetoresistance effect element of the [above-mentioned] thin film magnetic head and a resistance detector element for monitoring [the] a lapping

process and measures dimensions and alignment of the [above-mentioned] thin film magnetic head from the detected geometrical information.

Please add the following new claim:

--20. Method of measuring dimensions and alignment of a thin film magnetic head according to claim 1, wherein the illuminating light has a wavelength of 200 nm.--